

WHAT IS CLAIMED IS:

1. A non-contact type profile measuring apparatus comprising:

a converting section for converting a light
5 transmitted from a light source into a light including
a component parallel with an optical axis;

a light receiving lens for receiving a light
including a shadow of a measurement object which is
provided to intercept a part of the light;

10 a first diaphragm provided in a first rear side
focal position of the light receiving lens;

a one-dimensional image sensor for receiving a light
passing through the first diaphragm;

a signal processing section for obtaining a
15 dimension of the shadow of the measurement object as an
outside dimension of the measurement object by processing
an electric signal obtained from the one-dimensional image
sensor;

a display section for displaying the outside
20 dimension thus obtained;

a beam splitter provided on an optical path between
the light receiving lens and the one-dimensional image
sensor; and

a two-dimensional image sensor for receiving a light
25 split by the beam splitter,

wherein the signal processing section processes an electric signal obtained from the two-dimensional image sensor, and the display section displays a monitor image including a measured portion of the measurement object.

5

2. The non-contact type profile measuring apparatus according to claim 1, wherein the beam splitter is provided between the first diaphragm and the one-dimensional image sensor.

10

3. The non-contact type profile measuring apparatus according to claim 1, further comprising:

a second diaphragm in a second rear side focal position of the light receiving lens formed between the beam splitter and the two-dimensional image sensor,

15 wherein the beam splitter is provided between the light receiving lens and the first diaphragm.

4. The non-contact type profile measuring apparatus according to claim 1, wherein the signal processing section obtains a measuring line corresponding to the measured portion of the measurement object from which the one-dimensional image sensor receives the light, and the display section displays the measuring line so
20 that it is superposed on the monitor image of the
25

measurement object.

5. The non-contact type profile measuring apparatus according to claim 1, wherein the signal
5 processing section obtains a mark indicative of an edge position of the shadow of the measurement object by processing the electric signal obtained from the one-dimensional image sensor, and the display section displays the mark so that it is superposed on the monitor
10 image of the measurement object.

6. The non-contact type profile measuring apparatus according to claim 1, wherein the display section displays a tolerance of the outside dimension of the
15 measurement object.